

Listing of Claims

The following listing of claims will replace all prior versions, and listings, of claims in the subject application:

1. (currently amended) A polymer gel electrolyte composition comprising a crosslinked polymer network matrix having a three-dimensional crosslinked structure containing a solution of an electrolyte in a non-aqueous solvent, and a non-crosslinked polymer included in the crosslinked polymer network matrix, wherein the non-crosslinked polymer ~~comprises (a) an ethylene unit and/or propylene unit; and (b) an unsaturated carboxylic acid unit having a carboxyl group esterified by a polyalkylene glycol having one terminal hydroxyl group protected~~ is obtained by reacting a polyalkylene glycol compound having one terminal hydroxyl group protected, with a precursor polymer containing an ethylene unit and/or propylene unit and an unsaturated carboxylic acid unit.

2. (currently amended) The composition according to claim 1, which contains 1 part by weight of the non-crosslinked polymer, 0.1 to 2 parts by weight of the crosslinked polymer network matrix and 3 parts by weight or more of the electrolyte solution.

3. (original) The composition according to claim 1, wherein the polyalkylene glycol is a polyethylene glycol, a polypropylene glycol or a polyethylene/propylene glycol.

4. (currently amended) The composition according to claim 1, wherein the non-crosslinked polymer further contains ~~a third~~ an additional copolymerizable monomer unit in an amount of .30% by mole or less.

Claim 5 (canceled).

6. (original) The composition according to claim 1, wherein the non-crosslinked polymer has a weight-average molecular weight of about 2,000 to 800,000.

7. (original) The composition according to claim 1, wherein the non-crosslinked polymer contains the ethylene unit and/or propylene unit in an amount of 50 to .95% by mole.

8. (currently amended) The composition according to claim 1, wherein the crosslinked polymer network matrix is constituted by crosslinkable monomers having two or more reactive functional groups selected from the group consisting of vinyl group, epoxy group, amino group, amide group, imide group, hydroxyl group, methylol group, carboxyl group and isocyanate group.

9. (original) The composition according to claim 1, wherein the electrolyte solution contains the electrolyte in an amount of 0.1 to 3 moles/liter.

10. (original) The composition according to claim 1, wherein the non-aqueous solvent is at least one aprotic solvent selected from the group consisting of a carbonate ester, a lactone, a sulfolane, N-methylpyrrolidone and trimethyl phosphate.

Claims 11-20 (canceled).

21. (original) An electrochemical device comprising the polymer gel electrolyte composition according to claim 1.

22. (new) A polymer gel electrolyte composition having a semi-interpenetrating polymer network structure and comprising:
a crosslinked polymer network gel matrix having a three-dimensional crosslinked structure containing a solution of an

electrolyte in a non-aqueous solvent; and

a non-crosslinked polymer penetrating the crosslinked polymer network gel matrix, the non-crosslinked polymer comprising (a) an ethylene unit and/or propylene unit, and (b) an unsaturated carboxylic acid unit having a carboxyl group esterified by a polyalkylene glycol having one terminal hydroxyl group protected.